

Online Research @ Cardiff

This is an Open Access document downloaded from ORCA, Cardiff University's institutional repository: <https://orca.cardiff.ac.uk/id/eprint/129169/>

This is the author's version of a work that was submitted to / accepted for publication.

Citation for final published version:

O'Mahony, Kieron ORCID: <https://orcid.org/0000-0002-2227-2344> 2020.
Blurring boundaries: Feral rewilding, biosecurity and contested wild boar belonging in England. *Conservation and Society* 18 (2) , pp. 114-125.
10.4103/cs.cs_19_39 file

Publishers page: http://dx.doi.org/10.4103/cs.cs_19_39
<http://dx.doi.org/10.4103/cs.cs_19_39>

Please note:

Changes made as a result of publishing processes such as copy-editing, formatting and page numbers may not be reflected in this version. For the definitive version of this publication, please refer to the published source. You are advised to consult the publisher's version if you wish to cite this paper.

This version is being made available in accordance with publisher policies.

See

<http://orca.cf.ac.uk/policies.html> for usage policies. Copyright and moral rights for publications made available in ORCA are retained by the copyright holders.



This is a pre-copy-edited, author-produced PDF of an article accepted following peer review for publication in *Conservation and Society*.

Blurring boundaries: Feral rewilding, biosecurity and contested wild boar belonging in England

In Special Issue: Rewilding ‘Feral Political Ecologies’

Kieran O’Mahony, *School of Geography and Planning, Cardiff University, UK.*

Abstract

Unsanctioned life is often categorised as ‘feral’, a value-embedded term that orders non-humans in relation to various temporal-spatial, genetic or behavioural logics. Such labelling is frequently used to marginalise risky, undesirable life and allow space for strategies of control and regulation. Feral natures, however, might also be understood as an important, though frequently ignored, form of rewilding situated where strategies of conservation and biosecurity converge. Using the example of (re)introduced wild boar (*Sus scrofa*) in England as ‘feral rewilding’ in action, this paper considers how the politics around their presence are contested by actors who hold different understandings of wild boar and human-nonhuman relations more broadly. After a multi-century absence, over the last three decades farmed wild boar have escaped and been deliberately released, occasionally establishing autonomous and self-sustaining populations. This is most visible in the Forest of Dean where their unfamiliar presence has increasingly reconfigured social relations. Being categorised as ‘feral’ as a strategy of governance is a contributing factor to a fraught political landscape where wild boar belonging is constantly questioned.

Key Words: wild boar, rewilding, biosecurity, wildlife conflict, feral species, human dimensions, reintroductions, animal geography

1- INTRODUCTION

First thing, the last day of July, and clouds sit heavily over the Forest of Dean, everything still moist from overnight rain. An hour later, however, and the summer sun is already burning through, shining brightly as I drive through the rolling hills and bucolic, agricultural countryside that surrounds the wooded forest. Hedgerows enclose large arable fields and grazing pasture, some with pollarded oaks that form shade for sheep. These are the pastoral borderlands of England and Wales. Later that morning I sit with Steve in his old, stone cottage, the thick walls insulating from the outside warmth.

¹. He was working for a government agency around the time wild boar (*sus scrofa*) first re-appeared in the region in the late 90s². In his words, a farmer just north of the forest “went broke...gave up and let the boar out”. The boar found themselves in a heavily farmed landscape and were swiftly shot if they moved beyond patches of woodland to farmland. This made them a relatively inconspicuous presence, only occasionally avoiding rifle sights, venturing into settlements and becoming visible to the wider public³.

Six years later, in the winter of 2004, another group suddenly appeared on Forestry Commission (FC) land to the west of the main forest block. Their presence was first

encountered by a horse rider who “couldn’t believe [her] eyes” when “a group of something” materialised into boar⁴. These animals, Steve explains, had been “dumped” on public forest estate but, somewhat surprisingly, local authorities were unable to track their owner.

Rumours still circulate about who this was and why they did it. Was it a bankrupt farmer; someone perturbed by biosecurity controls imposed after the UK’s 2001 foot and mouth outbreak; or else an owner who found boar too feisty to farm? On account of this uncertainty and at a time when there was no government policy on boar, Steve explains the Forestry Commission “had no power to do anything” even though they “could have shot the lot there and then.” Whilst bureaucratic decisions were taken on how to proceed, the boar began exploring and dispersed into the wider forest, official explanations suggesting these separate groups of boar merged in the core woodland sometime during 2006 (Stannard 2011: 3).

Steve, however, suggests this isn’t the whole story. Voicing another rumour, I frequently heard, he tells me “somebody moved some of them”, perhaps out of “mischief or intrigue.” It seems the current bio-geographies of boar in the Forest of Dean have been shaped by multiple “man-made interventions”, in Steve’s words, as well as the agential capacities of boar themselves.

This is one story speaking of the unsanctioned (re)introduction of boar to the British countryside after a multi-century absence (Goulding 2003; Wilson 2014). Specifically, it introduces the Forest of Dean, where the origins outlined above have unfolded dramatically over recent years. As boar have become more populous and their presence more visible, so tensions have grown over the ways and extent to which they are reconfiguring the lives and environments of different human and nonhuman actors. After such a long period without boar, their (re)introduction has led to the emergence of new wildlife legislation and governance strategies as authorities have sought to regulate their presence. This paper

addresses the complexity and discordance of boar politics in England, primarily by focussing on policy developments and divergent understandings of their reappearance and categorisation as ‘feral’. These issues chime with other geographic research on the ‘controversies’ that might emerge around disputed scientific knowledge practices, such as the logics that frame species belonging (Gibbs et al 2015; Crowley et al 2017; Rutherford 2018), as well as literature looking at the social aspects of conservation and wildlife ‘conflict’ (Redpath et al. 2013). These tend to highlight the multiple power relations, knowledges, values, belief systems and practices that are bound up in contested wildlife politics.

1.1 Rewilding, biosecurity and boar

To help examine boar politics in England, this paper grounds discussion in two conceptual framings of human-nonhuman relations; rewilding and biosecurity. These ‘competing philosophies’ (Buller 2008) and ‘modes of nonhuman biopolitics’ (Lorimer and Driessen 2013) are increasingly held in tension as rewilding emerges as an alternative to longstanding, ‘orthodox’ strategies of conservation and wildlife governance (Lorimer 2015). Though encompassing a multiplicity of approaches, rewilding ‘as practice’ generally seeks to improve ecosystem functioning and ecological processes, often by (re)introducing absent or surrogate species perceived as valuable for this objective (Arts et al 2016; Jepson 2016; Lorimer et al. 2015; Prior and Ward 2016; Svenning et al. 2016). This involves a (gradual) reduction in human intervention and, where possible, opening up time and space for “autonomous biotic and abiotic agents and processes” to “co-produce...surprising ecological futures” (Prior and Ward 2016: 133–134).

Deciding which ‘keystone’ species- those which significantly alter trophic cascades and propagate multi-scalar, multi-directional ecological effects- to (re)introduce varies in relation to geographical location and social-ecological context (Svenning et al. 2016). In Europe, a particular focus has been on (re)establishing locally extirpated or surrogate herbivores- Heck cattle (as replacements for extinct aurochs), bison, horses, beavers- to instigate naturalistic grazing pressures and habitat disturbance. These various ‘wild experiments’ (Lorimer and Driessen 2014), however, frequently engender ethical debates around wildness, naturalness and nonhuman autonomy; the ways these materially and aesthetically manifest; and their relationship to cultural and political conceptions of spatial-temporal belonging (Lorimer and Driessen 2013; Prior and Brady 2017; DeSilvey and Bartolini 2018; Vasile 2018; Ward 2019). Rewilding, therefore, provokes longstanding discussions about what species are valued where and by whom, something gathering pertinence at a time when human-nonhuman relations are rapidly changing within and beyond the boundaries of conservation.

Critically, rewilding should also be understood as occurring ‘spontaneously’ and beyond the formalised spaces and mechanisms of conservation practice (Drenthen 2016). As Hearn et al. (2014) note, rewilding is not necessarily “a consciously and carefully designed plan of interlinked reserves” (54), but something that also happens unintentionally, unofficially, and through processes of regeneration, succession and recolonisation. These “unplanned experiment[s]” (ibid: 61) are evidenced throughout continental Europe, where widespread rural depopulation and abandoned pastoral landscapes have facilitated what might be termed ‘passive rewilding’, as once carefully managed landscapes de-domesticate (Navarro and Pereira 2015; Pettorelli et al 2019). Some of these evolving landscapes have been appropriated into rewilding initiatives (Jepson 2016; Lorimer and Driessen 2016), including experiments (re)introducing bison (Vasile 2018) and horses (DeSilvey and Bartolini 2018).

Additionally, they have also facilitated the widespread resurgence of charismatic fauna such as large carnivores (Boitani and Linnell 2015) and ungulates (Hearn et al. 2014). Considering rewilding as interrelated processes and agencies makes it appear less about cleaving human-nonhuman natures apart and more comprehending wildness as relational, fluid and existing through varying degrees of autonomy (Ward 2019; DeSilvey and Bartolini 2018; Deary and Warren 2017).

Thinking of rewilding as more spontaneous, relational processes helps frame contemporary boar politics. Though unofficially (re)introduced boar in the UK are a recent presence and exist in relatively small populations, at a global scale they are classified by the IUCN as of “least concern” (Oliver and Leus 2008: 1). Unlike the wild ancestors of many domesticated species, boar have neither been pushed to extinction, as with aurochs (*Bos primigenius*) and tarpan (*Equus ferus ferus*), nor survive as vulnerable species, such as mouflon (*Ovis orientalis*). On the contrary, their populations are steadily growing and geographies expanding in their ‘native’ Eurasian range, as well as places where they have been introduced over the last 500 years (Keuling et al. 2017; Massei et al. 2015). In Europe, this success appears related to an admixture of various biological, ecological and environmental factors. In part, it is attributable to the aforementioned re-constitution of rural space, where human depopulation and changing agricultural practices have also diminished rural hunting cultures (Massei et al. 2015). Conversely, in places where hunting cultures persist, supplementary winter feeding and deliberate boar releases have increased boar population density (Hearn et al. 2014; Massei et al. 2011).

These anthropogenic effects intermingle with their behavioural ecology. Firstly, boar are omnivorous generalists that can forage, root, browse, graze, scavenge and predate a range of vegetal or animal matter (Barrios-Garcia and Ballari 2012). Such flexibility helps them inhabit a diverse range of habitats, including semi-arid environments, marshlands, grasslands, as well as temperate and tropical forests. Secondly, boar fertility is not only onset by body weight rather than age, but also adapts according to food availability and climate (Frauendorf et al. 2016). Whilst this can lead to fluctuating populations, increasingly clement winters and more regular woodland food sources (such as beech and oak mast) caused by a changing climate have decreased biological stressors and further facilitated population growth and expansion (Vetter et al. 2015).

Though some rewilding initiatives take advantage of de-domesticating cultural landscapes, ‘auto-rewilding’ (see Tsing 2017) is not necessarily defined by spatial separation from humans, but also occurs in their proximity. This might blur the moral boundaries between ‘domestic’ and ‘wild’ space and generate a range of biological and ontological insecurities (Buller 2008). Rewilding, therefore, appears in tension with strategies of biosecurity which, broadly speaking, attempt to manage, control and regulate “unruly biological matter” (Barker et al. 2013: 5) such as pathogens or wildlife that threaten agricultural systems, biodiversity and ecosystem functioning (Hinchliffe and Lavau 2013; Enticott 2008; Barker 2008).

Biosecurity might be understood as a fundamentally spatial-temporal concern which, firstly, involves drawing or policing boundaries and territories and, secondly, categorising nonhuman life and regulating its movements accordingly (Barker et al 2013; Lorimer 2015). These boundaries, therefore, are also legal, ethical and conceptual and enacted through a range of ‘political techniques’ (see Law and Mol 2008), including fencing, hunting and culling, or else classifying species as native/non-native, invasive, wild/domestic, or feral.

Flourishing boar populations and their expanding European geographies have increasingly spurred debates around insecurity and governance. Boar movements into farmland and their consumption of arable crops have reportedly increased, as have traffic accidents (Massei et al. 2015; Náhlik et al. 2017). Long-standing worries about disease transmission from boar to domestic livestock have intensified, particularly as African Swine Fever has spread globally (More et al. 2018). Furthermore, boar are increasingly inhabiting and foraging in urban locations, further changing the spatial dynamics of their human relations (Náhlik et al. 2017). As tensions between boar rewilding and biosecurity have grown, so too has social research exploring the contested knowledges, attitudes and beliefs of different publics over their presence and governance (Hearn et al. 2014; Keuling et al 2016; Storie and Bell 2017).

This paper contributes to such literature by considering the growing controversy that has emerged around boar in England. It examines how wildlife policy and practice has sought to regulate their sanctioned return as livestock as well as their unsanctioned presence living in the wild. Importantly, it pays attention to the emergence and motivation of different political techniques, notably the categorisation of boar as ‘feral’, to facilitate governance. Far from foreclosing debates, this ambiguous category has become a site of contestation among different actors seeking to frame discourse around boar belonging. As such, multiple ‘feralities’ have emerged with different logics- spatial, temporal, ecological, biological and phenotypical- and evoked in relation to divergent understandings of wildness, naturalness and nativeness. This situation in England, and the Forest of Dean more specifically, is considered to be an example of ‘feral rewilding’, a concept which not only foregrounds the difference

between rewilding in and out of practice, but also its interrelated human-nonhuman histories, politics, tensions and uncertainties.

2- METHODOLOGY

This paper is based on ethnographic research broadly following the different lives, locations and contexts connected by boar political ecologies in England. Fieldwork, however, was primarily undertaken in the Forest of Dean (Figure 1). Situated on a plateau between two rivers on the English-Welsh border, its historic isolation has helped shape a relatively distinct cultural landscape, something research participants often point out when they tell me “the Dean is ‘different’”. Since the Forest of Dean was demarked as a Royal Forest for hunting in Norman times, its political boundaries have been fluid, though a core area has always been retained as public estate.

Since their establishment in 1919 to increase timber resources, the Forestry Commission (FC) has been the principle manager of the remaining statutory forest, something reflected in its mosaic of semi-natural woodland, native broadleaf and dense conifer plantations (Natural England 2015). Its earlier protected status did not prevent the incremental growth of industry inside and on its periphery, most extensively through the 17th – 19th centuries due to its charcoal, iron and coal resources. Over the last 100 years, however, most collieries, mines, quarries and railways closed, and many within the forest have been recolonised by bracken, beech, birch and other pioneering plants⁵. This industrial history has meant much of the woodland is ringed by settlements which dissolve into the edges of the forest, erasing clear distinctions between human and nonhuman space. For many residents, this fosters a close interest in forest ecologies and histories, as well as FC management practices. Such proximity

and connection mean the forest is used and understood by residents in multiple ways which, in turn, influences debates surrounding (re)introduced boar, feral rewilding and management in ways that generate a distinctive local boar politics.

My research involved spending one year, from autumn 2016 to autumn 2017, living in a village bordering the forest. This ‘slow’ methodological approach (Law 2004) provided opportunity to interact with residents in different social contexts, observe and participate in council and community meetings, and track discursive debates and stories as they circulated around. Moreover, it also facilitated ethological observations on the seasonality of boar movements, foraging patterns and their dynamic, multispecies interactions. Additionally, a key method was semi-structured interviews, 44 of which were static and carried out in locations chosen by participants e.g. offices, homes, cafes or pubs. I conducted another 20 as ‘go-alongs’, mobile interactions combining observation and discussion (Jones et al. 2008). These allowed me to follow participants’ work or recreational routines, practices and experiences of the forest *in-situ*. Participants were selected through a mix of ‘theoretical’ sampling and a more intuitive ‘snowball’ strategy (Gobo 2008). This involved highlighting key national stakeholders expressly referred to in policy documents, as well as identifying organisations representing key groups more loosely referenced. These included government agencies, local councils, agricultural interest groups, conservation NGOs and boar advocacy groups. Keen to decolonise boar debates from purely ‘official’ voices, I also interviewed a range of residents I encountered or was referred to during my time living in the forest. A final important method was policy analysis, which I carried out to understand how government agencies and authorities pre-empted and adapted to boar presence and subsequently formed strategies of governance.

Social life is messy and complex (Law 2004), so my qualitative research was not undertaken with the expectation that it would be wholly representative. Rather, it was to better understand how individuals, organisations and authorities make sense of boar in relation to their interests, experiences, practices and worldviews (see Valentine 2005). This, however, is not to say I was not concerned with identifying overlapping themes that would form a cogent, analytical story. For this reason, interviews covered a range of key topics that emerged from an earlier literature review, policy analysis and inductively during research itself. To carry out analysis, all interviews, ethnographic field notes and relevant policy documents were transcribed and then coded using NVIVO software to identify patterns and emergent themes, one of which was the politics of ‘ferality’.

3. BOAR POLITICS

The first two parts of this section explore the circumstances surrounding the (re)introduction of boar to the English countryside and their subsequent establishment in the wild. This is considered in relation to national policy and the emergence of an Action Plan that sought to order and regulate their ‘feral’ presence. Following this, the paper then picks up Steve’s origin story of boar in the Forest of Dean and introduces the current social tensions around their presence, before finally exploring how different logics bound up within ‘feral rewilding’ are applied and contested by actors with multiple understandings of boar belonging.

3.1 Blurring boundaries

In late summer, I head to a farm in southern England to meet Nicholas, an enterprising farmer whose father kept pigs. Nicholas, however, decided to keep boar, partly to create a distinctive agro-brand, but also because they fitted the habitat mosaic of his farm, a mix of woodland

and rough grassland. He is one of many who have turned to boar farming over the last four decades, starting in the early 1980s when EU grants were offered to encourage farmers to diversify and engage in ‘unconventional enterprises’, a response to previously damaging agricultural policies (Ilbery 1991). These included keeping rare breeds and novel livestock, a shift that led to a ‘wilding’ of farm space and introduced a range of incongruous animals to the UK, such as llamas, bison and ostriches, as well as some more familiar, like boar.

Nicholas tells me enthusiastically how “amazing” boar are, but also explains that the numbers of boar farms has declined since a peak 15-20 years ago. “Boar farming isn’t for everyone!”, he says. It seems the paperwork, difficulty in accessing licensed abattoirs and their contested politics make it a challenging proposition. This, and the character of boar themselves; “[t]hey are different to pigs, as their name suggests! They are wilder...not necessarily dangerous...but not domesticated”. For Nicholas, wildness is behavioural, rather than spatial.

Initially farmed in southern, lowland England, though increasingly elsewhere too, boar were first imported or acquired from zoological collections (Booth 1995). Those translocated from Europe originally came from Denmark and Sweden, where boar of German and Eastern-European origins were kept on game estates. These were selected on account of their “high health status” (Booth 1995: 246) and, thus, deemed suitable for UK import. By 1984, the emergence of boar farming contributed to their named inclusion in a Modification Order to the Dangerous Wild Animals Act 1976⁶ (DWAA), a policy regulating the ownership of a range of species from large mammals to small reptiles. The DWAA requires owners to apply for licences from local authorities who might grant approval if applications are “not contrary to the public interest on the grounds of safety, nuisance or otherwise” and show animals “will at all times...be held in accommodation which secures that the animal will not escape”⁷. As I walk with Nicholas around the perimeter fence of his boar enclosure, he outlines the

infrastructure that satisfies authorities' annual checks- the fence extends above head height, and both the mesh stock fencing and posts are buried deeply into the ground to prevent boar digging out. Not only is this rigid and taut, but an inner electric fence also deters boar from trying to escape. Nothing, he says, can get over, under or through.

The early principles of boar biosecurity in the UK, therefore, primarily relied upon regulatory and spatial 'borderlines' (Hinchliffe et al. 2013). Firstly, the English Channel is a topographical barrier that has prevented the autonomous movement and natural recolonisation of previously extirpated 'biothreats' into Britain, whether boar, bears or wolves. This isolation has helped shape, in Buller's (2004) words, "a safe countryside...accessible, appropriated and unthreateningly recognisable" (132). Importing boar as livestock, however, permeated this preventative border. Secondly, the DWAA licencing process should have ensured farm infrastructure 'secures' boar in enclosures. Whilst Nicholas's fencing seems high grade, Alexandra (agricultural representation group) tells me farm borders and inhabitants are often less secure than policy suggests. A lack of standardised government guidance means many DWAA licenses are signed off by unknowledgeable local authorities who "aren't able to adequately explain what security is needed, nor how to manage them". This is further compounded by "confusion" over Iron Age pigs (wild boar-Tamworth pig crosses) which, she explains, are "very wild boar-ish" but can be kept "as standard pigs" without licensing and security restrictions. This can be problematic as another participant tells me; "domestic traits can pretty much be bred out within a few generations...and hey presto, wild boar!" (Neville, farmer).

As boar appeared in farms, they simultaneously began appearing beyond them, too. From 1982/83-2009/10, there were 36 recorded incidents of boar escaping or being released from farms in England (Wilson 2014). These unsanctioned and unexpected events occurred through multiple, relational agencies. As well as inadequate infrastructure, groups of boar have escaped during storms, when activists have deliberately targeted farms, or during numerous other, hazily reported circumstances (Goulding 2003; Wilson 2014). Keen to minimise the likelihood of his boar following suite, Nicholas enacts security in more ways than just perimeter fencing. Before we meet, he is cryptic about his address, giving me only vague directions on how to reach his farm, later explaining he is wary of “attracting the wrong people”. Though he has never had any direct trouble, he says he knows farmers who have had issues with people who think boar “don’t belong on farms...because they see them as ‘wild’”. Being vigilant and low profile is one of his strategies of avoiding “trouble”.

In addition to the DWAA, boar were somewhat vaguely covered by the Wildlife and Countryside Act 1981 (WCA), a piece of legislation constituting another part of a regulatory, biosecurity framework (see Donaldson 2013). Section 14 of the WCA relates to “the introduction of new species”, stating:

“...if any person releases or allows to escape into the wild any animal which (a) is of a kind which is not ordinarily resident in and is not a regular visitor to Great Britain in a wild state; or, (b) is included in Part I of Schedule 9, he shall be guilty of an offence.”⁸

Part I of Schedule 9 initially listed 42 animals “established in the wild”, including species such as coypu, parakeets and grey squirrels, all of whose presence has been contentious and much debated. Though there was no direct reference to boar until 2010, it was inferred they

might be covered as they were no longer ‘ordinarily resident’. However, Simon (government ecologist) tells me he has “never heard of anyone getting hauled up for releasing them...[it’s] too difficult to prove”. Similarly, David (ex-government ecologist) explains, “boar would get out [of farms], but the legislation wasn’t really effective at stopping that...usually it was a case of hoping they just vanished...though some people were curious to see what happened.”

Whilst many boar did ‘vanish’, others found opportunities to establish self-sustaining, autonomous populations in woodlands and copses on the edges of farmland, mainly in Southern England (Figure 2). As they did so, events of crop and grassland ‘damage’, traffic incidents, and encounters between boar and domestic pigs were increasingly reported (Goulding 2003; Wilson 2014). For some, predominantly agricultural, actors, (re)introduced boar were becoming a problematic and risky presence. But for others, they were, and still are, ‘curious’. As a once ‘native’ species, researchers have sporadically pondered the feasibility of a sanctioned (re)introduction, partially motivated by their representation as ‘ecological engineers’ which enhance grassland and woodland biodiversity through rooting and creating disturbance mosaics (Leaper et al. 1999; Sandom et al 2013 a,b). For this reason, ‘Rewilding Britain’, an advocacy charity, describes boar as “excellent” candidates for (re)introduction⁹. Another motivation for (re)introduction appears less ecological and based on moral sentiments; “[b]oar have a right to be here...they were here with us for thousands of years...we don’t have the moral right to pick and choose what we want to live with” (James, boar advocacy group). But boar politics are full of tension, as shown by events in Europe. For this reason, (David, ex-government ecologist) suggests “boar would never have passed assessments to be officially reintroduced”, referring to the formalised protocols recommended by the IUCN (IUCN/SSC 2013). He adds, however, “of course the current

situation is different to a real reintroduction, but it is important to know what is happening...it is an unexpected opportunity”.

3.2 Making boar ‘feral’

Many boar (re)introductions, including in the Forest of Dean, occurred when there was no government strategy regarding their presence. In 2008, however, the Department for Environment, Food and Rural Affairs (DEFRA) published an ‘Action Plan’ outlining their status and how they should be governed. This followed a public consultation (DEFRA 2005); two risk assessments focussing on, firstly, disease biosecurity, and, secondly, biodiversity, social and economic impacts (DEFRA 2008); and several government research projects into their presence (Goulding et al. 1998; Moore and Wilson 2005). The consultation outlined three possible futures for boar in England: 1) no management; 2) a proactive government led national eradication; or 3) regional management to address concerns. Despite the possibility of eradication, most respondents felt boar should be allowed to remain, albeit with some kind of management due to concerns over agricultural security (DEFRA 2006). An important issue raised by “many respondents”, the consultation noted, was “that wild boar are a former native species...[and] have a right to exist in the countryside” (DEFRA 2006: 12), supporting a belief that, despite their unofficial (re)introduction, boar morally belonged in England.

In consideration of the consultation responses and risk assessments, the Action Plan followed option 3, stating that “primary responsibility for feral wild boar management lies with local communities and individual landowners”, with DEFRA and their “delivery partners”¹⁰ providing advice and guidance to help “regional management” (DEFRA 2008: 3). The Action Plan also reiterated the key principle for managing wildlife in England is one of “no

government intervention”, with this only occurring “where there is a sound reason and evidence for doing so” (ibid: 3). However, with the FC— a DEFRA body— the main landowner in the Forest of Dean, government intervention in boar management was inevitable, embroiling them in controversies they sought to avoid. The strategy also mirrored the broader approach to hunting in the UK, where species killable as ‘game’ are legally defined *res nullius* (nobody’s property), state intervention is minimal and management is generally uncoordinated (Phillip et al. 2009; Putman et al 2011). Critically, it also highlighted that the escaped and deliberately released boar should be understood as ‘feral’ rather than ‘wild’ because the government could “not condone the illegal release[s]” (DEFRA 2008: 6). In addition, there were also uncertainties over their genetic heritage.

Whilst this decision reflects normative understandings of ferality i.e. describing nonhumans “that have lapsed into a wild from a domesticated condition”¹¹, such a categorisation is value-laden and embedded with practical, moral and political implications (Donaldson and Kymlicka 2011; Gibbs et al 2015; Rutherford 2018). Mark (forestry officer) explains it means boar are not technically ‘game’ animals. Unlike ‘native’ deer species, therefore, they are not covered by legislation on closed hunting seasons, nor poaching. In the words of another forestry officer, John, being feral creates “...a deliberately grey area...it keeps things open to allow people to deal with them as they see fit”. This is important for some people with an agricultural interest, such as William (farmer) who says “...if the government won’t get rid of them, then landowners need to be able to protect their land as they wish”. Ferality, then, appears to be a political technique that legally simplifies boar presence and creates flexibility, allowing landowners to make them objects of control and, importantly, on their terms. In other words, “[a]s long as you follow general animal welfare laws, if you see wild boar as a pest, you can treat them like a pest” (Simon, government ecologist).

Making boar feral blurs categories and alters values. In David's (ex-government ecologist) words, it "ultimately implies boar are worth less than wild and domestic animals...so they can be managed accordingly". Darren (ecologist) suggests ferality "is deliberately confusing" in further ways, as it "quietly stirs questions about whether boar are native, non-native or invasive species", something achieving the objective of "making them easier to kill or cull". This 'confusion' and ambiguity was sown in the Action Plan which discusses 'native biodiversity' and boar as separate entities and followed a risk assessment template designed for non-native species. Furthermore, it was compounded by additional legislation in the form of The Infrastructure Act 2015, which amended Part I of Schedule 9 in the WCA (listing established species). Whereas previously this consisted of one group, the amendment split it into three specific categories: 'native', 'non-native' and 'animals no longer normally present', the latter category relating exclusively to boar and beaver¹². Importantly, this legislation also introduced 'species control orders', allowing authorities to "eradicate" or "control" the latter two categories on private land, with or without landowner behest. This change meant boar (and beavers) were distinguished from species legally recognised as native and non-native and could be forcefully controlled by authorities.

Not only have boar problematised binary classifications of species as domestic and wild, inducing their categorisation as feral, they have also revealed the fluid, political nature of nativeness and non-nativeness (Warren 2007). Whereas the commonly accepted "temporal threshold" (Head 2016: 43) defining 'native' species in the British Isles is the retreat of the last ice-age (10,000 years ago)¹³, because (re)introduced boar were unsanctioned this status has been deemed unsuitable. Whilst caution over (re)introduced boar makes sense in the

context of biosecurity concerns and in light of their burgeoning populations in Europe, the following sections highlight how the government strategy and its politics of ferality are integral to heated debates around their presence.

3.3 An ‘increasingly complicated’ situation

The Action Plan avoided a possible public controversy by dismissing eradication as a strategy. It also emphasised that “[t]he English countryside and our way of life have changed substantially since wild boar became extinct and there is therefore a degree of uncertainty concerning the impacts” (DEFRA 2008: 4). Boar, in other words, could live autonomously, but ‘local communities’ and ‘individual landowners’ were given flexibility to control them and their possible risks. The final two sections will focus on the way this ‘uncertainty’ has been evoked and ‘feral rewilding’ contested in the Forest of Dean.

When I begin fieldwork in autumn 2016, tensions are high. At this time of year, boar population dynamics and foraging strategies shift, often bringing them into the settlements ringing the forest. Stories circulate about digging in amenity spaces, sports fields and gardens. James (boar advocacy group) tells me these movements are part of an annual cycle, and that “[p]eople need to get used to the fact it is a forest of wild animals. They need to learn how to live with them...If it is an issue, put proper fences up.”. Others are similarly frustrated about “over the top reactions to some digging...[that] will go away” (Tim, resident). Yet, elsewhere, the suggestions are of a more significant change. According to FC monitoring, the boar population on the forest estate was estimated at 1562, up from 1018 the year before, despite the FC implementing a heavier cull¹⁴. The local newspaper runs an editorial headed “[w]ild boar issue needs resolution”, noting that in “another week... [there is] another victim

to add to the growing list” in the “eternal debate” over boar presence, this time when recounting a story of a cemetery rooted by boar¹⁵. The specificities of the Forest of Dean appear to have created “the perfect storm” (Simon, government ecologist): an ideal habitat in which boar can flourish in high densities; a controversial cull carried out by the FC in public; and a ring of villages and farmland in which boar forage.

Sitting in a dark meeting room, photos of old FC chiefs hanging from the walls, John (forestry officer) explains that phone calls and emails, his “barometers of public feelings”, have shifted from “relatively benign...to something far stronger”. Whereas a few years earlier people called out of curiosity to ask questions about boar, now there are mostly complaints about digging, traffic accidents and intimidating encounters in both the forest and settlements (Figure 3). Similarly, local councillors feel “there is a real problem” and “many residents are being made really uncomfortable and unhappy” as “the Dean changes around them” (Eddie). Though many agricultural actors had security concerns when boar first appeared, residents were generally “pro-boar” and enjoyed the “novelty” of their (re)introduction (Colin, councillor). Now, however, there is a growing “anti-boar sentiment” with more and more people “becoming less tolerant...saying they are not wild, calling them feral pigs, vermin, this kind of thing”. As one resident explains, “at the beginning people respected them as wild animals, but now more people see them as pests” (Patricia). Insecurity, it seems, has morphed from an agricultural concern, to a broader one of place and wellbeing. For some people, tolerance of wildness and autonomy has transitioned to intolerance.

However, the deepening of feelings is multidirectional and the views of “both extremes” are, Colin elaborates, “becoming louder”. It is not just people who “wish the boar away and

hanker after a time before they were here”, but also those who “love every animal...and would be protesting...no matter what”. Simplistically, people are often framed as wanting boar eradicated and being ‘pro-cull’, or else desiring more protection and being ‘anti-cull’. Certainly, comments in the press support the impression that everyone has a strong and definitive ethical stance. Yet, many people I speak to suggest they are “in the middle” (Ian, resident) or are “middle of the road” (Karen, resident), often empathising with security concerns and supporting management, whilst simultaneously valuing the presence of boar. As boar have grown in population and visibility, feelings have thus become “increasingly complicated” (Ian, resident). Indeed, most people I speak to are conflicted in ways that can render the frequently used binaries ‘pro-boar’ and ‘anti-boar’ somewhat misleading. Commonly identified ethical positions- eco-centric, utilitarian and animal centric- often portrayed as incompatible would appear less absolute in practice (see Peterson 2013).

Importantly, as with other wildlife controversies and conflicts (Redpath et al. 2013; Crowley et al. 2017), tensions are not just related to boar, but between individuals and organisations with contrasting understandings of how to live with and govern wildlife. Despite the fluid feelings of many residents, for some councillors the growing “social friction” is a concern (Eddie, councillor), highlighted by participants who say they have been physically and verbally abused for their views. While many participants try to empathise with different sides of the argument, others become entrenched in stereotypes of ‘others’, whether the “fucking tree huggers” seen as preventing boar control (Duncan, resident), or “the murderers who want to eradicate everything” (Patricia, resident).

Where many residents do find common ground, whatever their beliefs, is in a frustration with the “incompetent management” of authorities (Neil, resident), whether councils, the FC, or

DEFRA. These are all commonly perceived to have avoided taking any ‘responsibility’ on behalf of the ‘local community’, as the Action Plan suggests should happen.

“It is obviously difficult because people are divided, but things could be managed better...there could be proper advice, education, helplines, financial support for fencing. This would make people more tolerant, help us live with these wild animals...authorities just stick their head in the sand.” (Tim, resident).

For local authorities unfamiliar with boar, on the other hand, it is difficult to “improve things for people and for boar” when they “don’t have the expertise, resources or jurisdiction...and the government don’t provide a steer” (Eddie, councillor). The DEFRA policy of ‘no interference’, therefore, seems increasingly inadequate for helping divided communities live with and govern feral rewilding when it is happening in proximity to settlements.

3.4 Contesting ‘feral’ logics

The previous sections introduced how boar might become contentious and draw together the values, beliefs and practices of a diversity of actors, reflecting studies from elsewhere in Europe (Hearn et al. 2014; Keuling et al. 2016; Storie and Bell 2017). In England, however, tensions over their rewilding and belonging are often held in relation to their unsanctioned, feral status. This section considers how ferality might be framed through several different, contested logics which are often evoked in relation to wildness and security.

Firstly, the DEFRA Action Plan primarily relies upon a normative, spatial-temporal logic of ferality. That is, it emphasises the unsanctioned movement of boar from domesticated to wild space. For some participants this is an “appropriate term” that encapsulates the “current stage” of boar presence in England (David, ex-government ecologist). This view is shared by

forestry officers, as well as many residents who have been adjusting their lives to the unexpected presence of boar, such as Lorraine. She tells me that boar have “made forest life more difficult in many ways” and that “they aren’t meant to be there”. In her mind, “they are feral because...they have gone wild instead of being truly wild ones”. Lorraine infers ‘true’ wildness is intrinsic, fixed and, perhaps, unattainable for animals that, she adds, “are possibly still domesticated”. In contrast, Karen (resident), who is more ambivalent about boar, says:

“[t]he first generation could be seen as feral, but not these ones, not anymore...They have been here for 15 years or so, right? These aren’t feral, these are wild. They certainly behave like wild animals...they do what they want, go where they want, eat what they want”.

Similarly, Mike (resident), a born and bred local who enjoys their presence, argues “they have been here long enough now...many successive generations born in the wild...the feral label should be taken away. Now, they are ‘wild’ wild boar”. Uncertainty over spatial-temporal logics, perhaps surprisingly, also extends to stakeholders such as Alexandra (agricultural representation group), who explains; “they are feral wild boar because they have originated from escapees, which makes sense. But at some point, after generations and generations, when does an animal become a native species?”. Here, ferality blurs with non-nativeness, reflecting the ambiguity of legislative changes.

These comments bring together divergent understandings over the persistence of spatial-temporal classifications on one hand, and individual nonhuman autonomy on the other. Why, some people wonder, are animals five or more generations removed from original escapees to be regarded as feral? James (boar advocacy group), enthused by boar making the forest “a more exciting...wilder place”, rhetorically asks whether “the government will still call them

feral in 1000 years? Or will those individuals finally...be called wild?”. There is, it appears, an ethical difference, with some people understanding boar as an unchanging species or population, whilst others regard them as ever-evolving individuals and social groups. Moreover, understandings of ferality relate to varying conceptions of wildness, at times perceived as a static and intrinsic property, or else part of a wild-domestic continuum that shifts according to autonomy and (lack of) control (Palmer 2010).

Secondly, the Action Plan also alludes to a logic of genetic impurity, stating it covers “wild boar and wild boar hybrids” due to the fact “it is often not possible to distinguish between them in the field” (DEFRA 2008: 4). Impurity itself is elicited and contested in several ways—phenotypically, biologically and behaviourally. On a cold afternoon in winter, I speak to Lee, a local craftsman, at his forest workshop. As we discuss the forest and its wildlife, he explains he owns domestic pigs and so has a “special interest” in boar:

“There is a lot of rubbish out there. People don’t know the real story...They are not real boar, they are feral pigs. You can see it in their physiology. There is white on their thighs. They have shorter snouts. Their bodies are a different shape. They have a different, flatter back. Curly tails...They shouldn’t be here.”

Despite the Action Plan suggesting they are similar, Lee feels his knowledge allows him to identify physical differences between ‘real boar’ and, in his terms, ‘feral pigs’. This confirms his belief they don’t belong and justifies his concerns over biosecurity, especially for his rare pig breeds. A few other participants comment along similar lines, mentioning “they don’t look quite right” (Duncan, resident) and “their coat isn’t that of pure boar” (Neville, farmer). These suggestions, however, appear to be in the minority. Mike, a resident who habitually

tracks and photographs boar explains how observing boar feels “as if you are back in the mediaeval times...like it would have been years and years ago...a connection to the past...they’ve made the forest wilder”. Any sense that they are not pure boar for Mike would be “irrelevant”, but he insists “they are boar anyway, or at least look like them. Long snouts, pricked ears, dark pelage”, a description in line with those of many other people, whether residents or forestry workers¹⁶. Boar morphology, it seems, is one way in which the uncertain boundaries of ferality are contested, with different knowledges contrastingly used to assert their closeness to either domesticity or wildness (Figure 4).

There are wider concerns relating to purity, however, and the way this may influence boar biology and behaviour. Stephen (government ecologist) believes they are not “true boar...[and] were deliberately crossed with pigs...to make them more fecund and, perhaps, more docile”, a view supported by others who suggest boar behave and interact differently. Harry (wildlife management advice group) says they are different to “our past native boar”, arguing he would be more supportive “if they had the proper, pure boar genetics...but these have a considerable amount of domestic pig in them...they don’t reproduce the same”. Whilst many people are concerned about the implications of “very, very prolific” reproductive rates on agricultural security, particular in light of African Swine Fever (Alexandra, agricultural representation group), some conservation stakeholders also worry that an “unnaturally high fecundity...will harm really important and vulnerable species” (Alison, government ecologist). Whereas official stakeholders are cautious over their language, many residents are not. Neville (farmer) tells me he is “wary of saying they are pests, but it feels like that is what they are...They breed like anything those beasts”. The sense that ‘impure boar’ are proliferating and “taking over” (resident, council meeting) generates multiple agricultural, ecological and social concerns regarding change and uncertain futures.

Critically, however, boar impurity is disputed. At a public meeting, Carl (forestry officer) tells his audience that “there is no such thing as a 100% pure wild boar” and those in the Forest of Dean are “pretty much pure”. He also explains there is “no definite second peak” in breeding cycles, suggesting females tend to farrow once a year, and that data on culled females shows they average 6.7 piglets per litter. This number, it seems, is higher than many European countries, but comparable to boar found in Hungary and Germany (Keuling et al. 2017; Frauendorf et al. 2016). Other participants speak along similar lines, suggesting “hybrid, feral and true boar...are more or less the same beast” (Stephen, government ecologist) and that “our boar are as wild as European boar...but all boar everywhere are partially hybridised” (Adrian, resident). Indeed, studies suggest the majority of boar show extremely complex, multi-directional genetic intermingling with domestic pigs (Evin et al. 2013).

These arguments make some people befuddled by the focus on boar origins and hybridity. Darren (ecologist) acknowledges concerns over biosecurity, but believes “the purist argument is a strange one”, and that if (re)introduced animals “behave as any wild boar would be expected to in the current ecosystem...it is difficult to say they aren’t wild...or they shouldn’t be here”. Rather than being determined by genetics, therefore, it is autonomous behaviour and function that should be important. But uncertainty is hard to escape. David (ex-government ecologist) agrees boar could be a valuable presence, but struggles to abandon their problematic (re)introduction, commenting “even if they behave the same, which nobody really knows, from a purist conservationist perspective...it would be good to know they were genuine...just to be sure”.

These debates about ferality and belonging feed into all aspects of boar politics in the Forest of Dean. The comments sections in local newspapers and social media groups play out similar arguments, as do council meetings and everyday conversations. Some people find the focus on ferality and associated boundary terms- wildness, nativeness, invasiveness- tiring. A common sentiment is that politics needs to move on. As Lorraine (resident) comments, “they might be mixed or not...it is too late now, they are here”. Similarly, Tim (resident) argues “whether they were released illegally or not, it doesn’t look like they’ll disappear...It doesn’t matter what they are” (Tim). But this, however, appears difficult, when both boar and policy persistently blur boundaries.

3- CONCLUSION

Through a combination of changing political ecologies, elemental forces, damaged or inadequate farm infrastructure, human hands and their own agency, boar have been re-configuring human-nonhuman relations in areas of rural England for around three decades. Whereas their presence in many locations has been fleeting or regulated by shooting, the situation in the Forest of Dean has become more significant. An increasing boar population, a benevolent habitat, a controversial public cull and growing tensions over ecological, agricultural and cultural change have sparked fervent debates. To help understand this event, it has been framed as an example of ‘feral rewilding’, a term describing the unsanctioned (re)introduction of once common, extirpated ‘native’ species from domesticated to wild spaces. Using such a lens is productive for several reasons. Firstly, it contributes to other literature that expands the attention of rewilding beyond intentional and deliberate conservation practices to the spontaneous, emergent, unplanned and relational processes of recolonisation, restoration or regeneration (Hearn et al. 2014; Buller 2008; Drenthen 2016). This helps situate rewilding at a point where it converges with the multifarious interests and

issues of biosecurity, ontological security and wildlife governance. Thinking of boar through feral rewilding implicitly foregrounds the spatial and moral ambiguities of their unofficial (re)introductions and the messy boundaries that separate wildness-domesticity, or nature-culture. Furthermore, it actively distinguishes rewilding in practice from that out of practice, making an important acknowledgement that these emerge from and create different political and social contexts.

Whilst rewilding practices have been criticised for prioritising ecological issues over social concerns (Butler et al 2019), the feral rewilding of boar emphasises the inherent tensions and contested politics that surround species (re)introductions, amongst which are the categories and logics used to order desirable and undesirable life. When boar were (re)introduced in England, there was no specific policy covering their presence. The 2008 Action Plan and subsequent Infrastructure Act 2015 addressed this by categorising them as ‘feral’ and ‘no longer normally present’, thus delegitimising their wildness and nativeness. This was most likely a judicious decision ensuring they could both remain and, critically, be subjected to control. Though the hope might have been to minimise or avert controversy, however, such political ambiguity appears to have informed and helped fuel debates. Aspects of the Action Plan and other policies have mingled with situated knowledges, beliefs and discourses which have both informed, and been informed by, multiple ‘feralities’. These predominantly put forth or dispute spatial-temporal, genetic, phenotypical, behavioural, biological and aesthetic logics to rationalise boar belonging, often in combination. Feralities might be evoked variously through intrinsic moral hierarchies or dynamic continuums of wildness-domesticity and naturalness-non-naturalness, multiplicities highlighted in other rewilding literature (Deary and Warren 2017; DeSilvey and Bartolini 2018; Vasile 2018).

As with work on other feral species (Palmer 2010; Donaldson and Kymlicka 2011; Gibbs et al. 2015; Crowley et al. 2017; Rutherford 2018), boar politics raise several questions about our ethical relationships and responsibilities towards awkward nonhumans. Does it matter, for example, if boar have less protection than deer if they carry a greater risk to multiple, multispecies actors? Who ought to ask and decide questions about their belonging? How might we live with large, challenging species who are able to live in proximity to humans? Living with boar has never been smooth and their presence is always likely to be contested, as shown elsewhere in Europe, as they blur spatial and moral boundaries. However, it seems strategies of wildlife governance that emphasise collaboration through ‘community’ and ‘regional’ management strategies ought to be more sensitive to how classifications feed into and generate particular political tensions. Rather than relying on political techniques of labelling to foreclose debates over nonhuman belonging, it would appear important for authorities to engage in regular, reflexive and meaningful dialogue with multiple actors to better understand the dynamic and diverse modes of living with and valuing unsanctioned wildlife. Though this is unlikely to solve tensions, it might offer more consensual and inclusive ways of thinking about future human-nonhuman relations and responsibility. This seems especially prudent as social-ecologies shift, rewilding becomes more commonplace and notions of nonhuman belonging become more fluid.

4. ACKNOWLEDGEMENTS

I am extremely grateful to everyone who gave their time and contributed in some way, shape or form to my fieldwork. Also, to Gareth Enticott and three anonymous reviewers who made insightful comments on earlier drafts. This paper comes from doctoral research funded by the Economic and Social Research Council (ESRC).

5. BIBLIOGRAPHY

- Arts, K., A. Fischer, and R. van der Wal. 2016. Boundaries of the Wolf and the Wild: a conceptual examination of the relationship between rewilding and animal reintroduction. *Restoration Ecology* 24(1): 27–34.
- Barker, K. 2008. Flexible boundaries in biosecurity: accommodating Gorse in Aotearoa New Zealand. *Environment and Planning A* 40(7): 1598–1614.
- Barker, K., S. Taylor, and A. Dobson. 2013. *Biosecurity: the socio-politics of invasive species and infectious life*. London: Routledge.
- Barrios-Garcia, M. and S. Ballari. 2012. Impact of Wild Boar (*Sus Scrofa*) in its introduced and native range: a review. *Biological Invasions* 14(11): 2283–2300.
- Boitani, L. and J. Linnell. 2015. Bringing large mammals back: large carnivores in Europe. In: *Rewilding European Landscapes* (eds Pereira, H. and L. Navarro). London: Springer.
- Booth, W. 1995. Wild Boar farming in the United Kingdom. *Journal of Mountain Ecology* 3 (0): 245–248.
- Buller, H. 2004. Where the wild things are: the evolving iconography of rural fauna. *Journal of Rural Studies* 20(2): 131–41.
- Buller, H. 2008. Safe from the wolf: biosecurity, biodiversity, and competing philosophies of nature. *Environment and Planning A*. 40(7): 1583–1597.
- Butler, J., J. Young, and M. Marzano. 2019. Adaptive co-management and conflict resolution for rewilding across development contexts. In: *Rewilding* (eds. Pettoirelli, N., S. Durant, and J. Du Toit). 1st edition. Pp 386–412. Cambridge. Cambridge University Press.
- Crowley, S., S. Hinchliffe., and R. McDonald. 2017. Nonhuman citizens on trial: the ecological politics of a beaver reintroduction. *Environment and Planning A* 49(8): 1846–1866.
- Deary, H. and C. Warren. 2017. Divergent visions of wildness and naturalness in a storied landscape: practices and discourses of rewilding in Scotland’s wild places. *Journal of Rural Studies* 54: 211–222.

DEFRA (Department for Environment, Food and Rural Affairs). 2005. *Feral wild boar in England: a consultation by the Department for Environment, Food and Rural Affairs*. London: UKGOV.

DEFRA (Department for Environment, Food and Rural Affairs). 2006. *Feral Wild Boar in England: a consultation by the Department for Environment, Food and Rural Affairs: Summary of Responses*. London: UKGOV.

DEFRA (Department for Environment, Food and Rural Affairs). 2008. *Feral Wild Boar in England: an action plan*. London: UKGOV.

DeSilvey, C. and N. Bartolini. 2018. Where horses run free? autonomy, temporality and rewilding in the Côa Valley, Portugal. *Transactions of the Institute of British Geographers* 44: 1–16.

Donaldson, A. 2013. Governing biosecurity. In: *Biosecurity: the socio-politics of invasive species and infectious life*. (eds Dobson, A., K. Barker, and S. Taylor). 1st edition. Pp. 75–88. London: Routledge.

Donaldson, S. and W. Kymlicka. 2011. *Zoopolis. a political theory of animal rights*. Oxford: Oxford University Press.

Drenthen, M. 2016. The return of the wild in the Anthropocene: wolf resurgence in the Netherlands. *Ethics, Policy and Environment* 18(3): 318–337.

Enticott, G. 2008. The spaces of biosecurity: prescribing and negotiating solutions to Bovine Tuberculosis. *Environment and Planning A* 40(7): 1568–1582.

Evin, A., T. Cucchi, A. Cardini, U. Strand Vidarsdottir, G. Larson, and K. Dobney. 2013. The long and winding road: identifying pig domestication through molar size and shape. *Journal of Archaeological Science* 40(1): 735–743.

Frauendorf, M., F. Gethöffer, U. Siebert, and O. Keuling. 2016. The influence of environmental and physiological factors on the litter size of wild boar (*Sus Scrofa*) in an agriculture dominated area in Germany. *Science of the Total Environment* 541(January): 877–882.

Gibbs, L., J. Atchison, and I. Macfarlane. 2015. Camel country: assemblage, belonging and scale in invasive species geographies. *Geoforum* 58: 56–67.

- Gobo, G. 2008. *Doing Ethnography*. London: SAGE.
- Goulding, M., G. Smith, and S. Baker. 1998. *Current status and potential impact of wild boar (Sus Scrofa) in the English countryside: A Risk Assessment*. no. March: 74.
- Goulding, M. 2003. *Wild Boar in Britain*. UK. Whittet.
- Head, L. 2016. *Hope and grief in the anthropocene: re-conceptualising human-nature relations*. London: Routledge.
- Hearn, R., C. Watkins, and R. Balzaretti. 2014. The cultural and land use implications of the reappearance of the wild boar in North West Italy: a case study of the Val Di Vara. *Journal of Rural Studies* 36: 52–63.
- Hinchliffe, S., J. Allen, S. Lavau, N. Bingham, and S. Carter. 2013. Biosecurity and the topologies of infected life: from borderlines to borderlands. *Transactions of the Institute of British Geographers* 38(4): 531–543.
- Hinchliffe, S. and S. Lavau. 2013. Differentiated circuits: the ecologies of knowing and securing life. *Environment and Planning D: Society and Space* 31: 259–274.
- Ilbery, B. 1991. Farm diversification as an adjustment strategy on the urban fringe of the West Midlands. *Journal of Rural Studies* 7(3): 207–218.
- IUCN/SSC (Species Survival Commission). 2013. *Guidelines for reintroductions and other conservation translocations*. Gland, Switzerland: International Union for Conservation of Nature and Species Survival Commission.
- Jepson, P. 2016. A rewilding agenda for Europe: creating a network of experimental reserves. *Ecography* 39(2): 117–124.
- Jones, P., G. Bunce, J. Evans, H. Gibbs, and J. Ricketts Hein. 2008. Exploring space and place with walking interviews. *Journal of Research Practice* 4(42): 1–9.
- Keuling, O., T. Podgórski, A. Monaco, M. Melletti, D. Merta, M. Albrycht, P. Genov, et al. 2017. Eurasian wild boar *Sus Scrofa* (Linnaeus, 1758). In: *Ecology, conservation and management of wild pigs and Peccaries* (eds Melletti, M. and E. Meijaard). 1st edition. Pp. 202–233. Cambridge: Cambridge University Press.

- Keuling, O., E. Strauß, and U. Siebert. 2016. Regulating wild boar populations is ‘somebody else’s problem’! - human dimension in wild boar management. *Science of the Total Environment* 554–555(June): 311–319.
- Law, J. 2004. *After method: mess in social science research*. London: Routledge.
- Leaper, R., G. Massei, M. Gorman, and R. Aspinall. 1999. The feasibility of reintroducing wild boar (*Sus Scrofa*) to Scotland. *Mammal Review* 29: 239–259.
- Lorimer, J. 2015. *Wildlife in the anthropocene: conservation after nature*. Minnesota: Minnesota University Press.
- Lorimer, J. and C. Driessen. 2013. Bovine biopolitics and the promise of monsters in the rewilding of heck cattle. *Geoforum* 48: 249–59.
- Lorimer, J. and C. Driessen. 2014. Wild experiments at the Oostvaardersplassen: rethinking environmentalism in the anthropocene. *Transactions of the Institute of British Geographers* 39: 169–181.
- Lorimer, J. and C. Driessen. 2016. From ‘nazi cows’ to cosmopolitan ‘ecological engineers’: specifying rewilding through a history of heck cattle. *Annals of the American Association of Geographers* 106(3): 631–652.
- Lorimer, J., C. Sandom, P. Jepson, C. Doughty, M. Barua, and K. Kirby. 2015. Rewilding: science, practice, and politics. *Annual Review of Environment and Resources* 40: 39–62.
- Massei, G., J. Kindberg, A. Licoppe, D. Gačić, N. Šprem, J. Kamler, E. Baubet, et al. 2015. Wild Boar populations up, numbers of hunters down? a review of trends and implications for Europe. *Pest Management Science* 71(4): 492–500.
- Massei, G., S. Roy, and R. Bunting. 2011. Too many hogs? a review of methods to mitigate impact by wild boar and feral hogs. *Human-Wildlife Interactions* 5(1): 79–99.
- Moore, N. and C. Wilson. 2005. *Feral wild boar in England: implications of future management options. A Report on behalf of Defra European Wildlife Division*. London: DEFRA.
- More, S., M. Miranda, D. Bicout, A. Bøtner, A. Butterworth, P. Calistri, S. Edwards, et al. 2018. African swine fever in wild boar. *EFSA Journal* 16(7): 1–78.

- Náhlik, A., S. Cahill, S. Cellina, J. Gál, F. Jánoska, C. Rosell, S. Rossi, et al. 2017. Wild boar management in Europe: knowledge and practice. In: *Ecology, conservation and management of wild pigs and peccaries* (eds Melletti, M. and E. Meijaard). 1st edition. Pp. 339–353. Cambridge: Cambridge University Press.
- Natural England. 2015. NCA 105 Forest of Dean and Lower Wye: landscape character assessment. <http://publications.naturalengland.org.uk/publication/3526102>. Accessed on November 20, 2019.
- Oliver, W. and K. Leus. 2008. *Sus Scrofa*. The IUCN Red List of Threatened Species 2008. <https://www.iucnredlist.org/species/41775/10559847> . Accessed on November 20, 2019.
- Palmer, C. 2010. *Animal ethics in context*. New York: Columbia University Press. November 20, 2019
- Peterson, A. 2013. *Being animal: beast and boundaries in nature ethics*. New York: Columbia University Press.
- Pettorelli, N., S. Durant, and J. du Toit. 2019. Rewilding: a captivating, controversial, twenty-first-century concept to address ecological degradation in a changing world. In: *Rewilding* (eds Pettorelli, N., S. Durant, and J. Du Toit). 1st edition. Pp. 1–11. Cambridge: Cambridge University Press.
- Phillip, S., N. Dandy, R. Gill, and D. MacMillan. 2009. Is legislation a barrier to the sustainable management of game species? a case study of wild deer in Britain. *Journal of Environmental Planning and Management* 52(8): 993–1012.
- Prior, J. and E. Brady. 2017. Environmental aesthetics and rewilding. *Environmental Values* 26(1): 31–51.
- Prior, J. and K. Ward. 2016. Rethinking rewilding: a response to Jørgensen. *Geoforum* 69: 132–135.
- Putman, R., M. Apollonio, and R. Anderson. 2011. *Ungulate management in Europe*. Cambridge: Cambridge University Press.
- Redpath, S., J. Young, A. Evely, W. Adams, W. Sutherland, A. Whitehouse, A. Amar, et al. 2013. Understanding and managing conservation conflicts. *Trends in Ecology and Evolution* 28(2): 100–109.

- Rutherford, S. 2018. The anthropocene's animal? coywolves as feral co-travelers. *Environment and Planning E: Nature and Space* 1(1–2): 206–223.
- Sandom, C., J. Hughes, and D. Macdonald. 2013a. Rewilding the Scottish Highlands: do wild boar, *Sus Scrofa*, use a suitable foraging strategy to be effective ecosystem engineers? *Restoration Ecology* 21(3): 336–343.
- Sandom, C., J. Hughes, and D. Macdonald. 2013b. Rooting for rewilding: quantifying wild boar's *Sus Scrofa* rooting rate in the Scottish Highlands. *Restoration Ecology* 21(3): 329–335.
- Stannard, K. 2011. *Feral wild boar: management plan- Forest of Dean. 2011-2016*. Coleford: Forestry Commission.
- Storie, J. and S. Bell. 2017. Wildlife management conflicts in rural communities: a case-study of wild boar (*Sus Scrofa*) management in Ērgļu Novads, Latvia. *Sociologia Ruralis* 57(1): 64–86.
- Svenning, J., P. Pedersen, C. Donlan, R. Ejrnæs, S. Faurby, M. Galetti, D. Hansen, et al. 2016. Science for a wilder anthropocene: synthesis and future directions for trophic rewilding research. *Proceedings of the National Academy of Sciences of the United States of America* 113(4): 898–906.
- Tsing, A. 2017. The buck, the bull, and the dream of the stag: some unexpected weeds of the anthropocene. *Suomen Antropologi* 42(1): 3–21.
- Valentine, G. 2005. Tell me about...: using interviews as a research methodology. In: *Methods in human geography: a guide for students doing a research project* (eds Flowerdew, R. and D. Martin) 2nd edition. Pp. 110–126. Harlow: Pearson.
- Vasile, M. 2018. The vulnerable bison: practices and meanings of rewilding in the Romanian Carpathians. *Conservation and Society* 16(3): 217–231.
- Vetter, S., T. Ruf, C. Bieber, and W. Arnold. 2015. What is a mild winter? regional differences in within-species responses to climate change. *PLoS ONE* 10(7): 1–17.
- Ward, K. 2019. For wilderness or wildness? decolonising rewilding. In: *Rewilding* (eds Pettorelli, N., S. Durant, and J. Du Toit). Pp 34–54. Cambridge: Cambridge University Press.

Warren, C. 2007. Perspectives on the 'alien' versus 'native' species debate: a critique of concepts, language and practice. *Progress in Human Geography* 31(4): 427–446.

Wilson, C. 2014. The establishment and distribution of feral wild boar (*Sus Scrofa* L.) in England. *Wildlife Biology in Practice* 10(3): 1–16.

¹ All participants have been given pseudonyms according to confidentiality and informed consent agreements.

² From here onwards, I refer to 'boar' rather than 'wild boar'. This is because many participants refer to them in this manner, and because the papers intentionally questions understandings of wildness and ferality

³ <http://news.bbc.co.uk/1/hi/england/gloucestershire/3375611.stm>. Accessed on January 15, 2019.

⁴ <https://www.walesonline.co.uk/news/wales-news/horse-rider-chased-wild-boars-2417248>. Accessed on January 15, 2019.

⁵ <http://www.deanverderers.org.uk/verderers-history.html> . Accessed on January 15, 2019.

⁶ <https://www.legislation.gov.uk/uksi/1984/1111/made> . Accessed on January 20, 2019.

⁷ <http://www.legislation.gov.uk/ukpga/1976/38/section/1> . Accessed on January 20, 2019.

⁸ https://www.legislation.gov.uk/ukpga/1981/69/pdfs/ukpga_19810069_en.pdf . Accessed on January 20, 2019.

⁹ <https://www.rewildingbritain.org.uk/rewilding/reintroductions/wild-boar> . Accessed on June 26, 2019.

¹⁰ At the time of the Action Plan, these included the Deer Initiative (DI), Natural England (NE), the Food Standards Agency (FSA) and Local Authorities Coordinators of Regulatory Services (LACORS). The latter is defunct.

¹¹ "feral, adj.2." *OED Online*, Oxford University Press. www.oed.com/view/Entry/69302 . Accessed on June 26, 2019.

¹² <https://www.legislation.gov.uk/ukpga/2015/7/part/4> . Accessed on June 26, 2019.

¹³ <http://www.nonnativespecies.org/index.cfm?sectionid=15> . Accessed on June 26, 2019.

¹⁴ <https://www.forestryengland.uk/article/more-information-about-wild-boar> . Accessed on June 26, 2019.

¹⁵ The Forester. October 26, 2016.